Podcasting in Physical Education Teacher Education

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Abstract

This paper assesses the role of podcasting in a postgraduate physical education teacher education (PETE) program. Twice weekly podcasts reflecting student teachers' participation in a games education module were made available shortly after instruction. Podcasting was used to enhance the social, emotional and pedagogical dimensions of games for these students. After 12 weeks of instruction, feedback on the intervention was provided through completion of a short survey. The survey was followed by a focus group interview involving a randomly selected group of six. Findings revealed that the majority rated podcasts highly in terms of being educationally helpful, conceptually enriching, and 'worth looking forward to'. Postgraduates also suggested that podcasting substantially supported preparing for tests and examinations, strengthened the teacher-student relationship, and had the potential to develop the physical education (PE) curriculum in schools. The preliminary results for games learning in PE were promising.

Key words: ICT, pedagogy, game-play

As Information Communication Technology (ICT) takes an ever increasing role in our everyday lives, educators are challenged to make this a reality in the pedagogy of the 21st Century. Can Physical Education (PE) afford to avoid making this leap of faith, is a question that confronts the profession. While students become more internet savvy in their day-to-day existence, PE has to grapple with such technological advances to maintain its relevance in their lives. How can technological advances be achieved without compromising the key domains of fitness, performance and sport?

Several internet facilities such as online discussion boards that involve discourse analysis, assignment drop-boxes, and the role of *urls* for selecting appropriate websites are familiar ways of enhancing Physical Education Teacher Education (PETE). However, these technologies may not be going far enough! Although some research on the role of ICT in education has been published (Abt & Barry, 2007; Campbell, 2005; Lazzari, 2009; Malan, 2007), a literature search revealed that little has been conducted in the domain of PE.

Of the many technological resources available, podcasting has emerged as a teaching and learning tool that is easy to deliver and has the convenience of access. However, the related literature suggests some ambiguity about the efficacy of podcasting. On one hand podcasts were seen as unpopular (Cann, 2007), without significantly affecting learning (Abt & Barry, 2007; Deal, 2007), while on the other they were reported to be supportive (Evans, 2007; Malan, 2007). Evans and Malan claimed that students' feedback was more enthusiastic about this medium than traditional methods and Kutz, Fenwick, and Ellsworth (2007) stated that final grades improved significantly. As it is common knowledge that students learn in different ways, the auditory experience of podcasting offers another avenue for learning (Honey & Mumford, 2006). Therefore, the purpose of this study was to explore and evaluate the social, emotional and pedagogical efficacy of podcasting as a potential enhancement for PE in teacher education.

Podcasting was added on top of all the normal pedagogical deliverables (such as lesson notes, lesson discussion and debriefing) in a foundation course called 'Principles of Games'. The course promoted an understanding of tactical awareness through a variety of different game-play experiences for student teachers to translate into suitable content for pupils in schools. Aspects of curriculum models such as Teaching Games for Understanding (TGfU: Thorpe & Bunker, 1986), Game Sense (den Duyn, 1997), Games Concept Approach (GCA: CPDD, 1999), Play-practice (Launder, 2001) and Sport Education (Siedentop, Hastie & van der Mars, 2004) were introduced to a new cohort of PE professionals.

Principles of play, as well as creatively designed packages for invasion clusters, were experienced by the student teachers with the average child in mind. In the 'Developmental Hockey' component, for example, a range of options from *deck hockey* (using dusters and quoits) to *puckball* (a fusion of ice hockey and floorball played on an indoor wooden court) and culminating with *field hockey* allowed students to experience a much wider range of activity and game play within a hockey cluster. Similarly, 'Developmental Rugby' explored variants of the code through *sogger* (a mixture of rugby and soccer), *buntball* (a fusion of Speedball with modified Aussie Rules), and ended with *touch rugby*. Whereas the 'hockey' exposure featured small-sidedness as an important pedagogical feature, the 'rugby' experience used larger numbers, but included several balls simultaneously in play. *Sogger*, for example, began with nine balls (eight soccer and one rugby), and reduced incrementally to three rugby balls, then one.

A 2009 Nielsen Media Index survey (The Media Group, 2009) of internet behaviors declared that "Singaporeans are [sic] more wired up than ever," especially Generation Y, whose age range (15-29) covers the majority of the participants involved in this study. Nielsen reported that 53% of Generation Y participated in social networking portals, such as podcasts, compared to 20% of generation X (30-44 years old). This statistic indicated a good match between the internet behavior of the postgraduates in the study and the technology being evaluated.

Method

Podcast – the Instrument

A 36-hour foundation course, Principles of Games, was taught twice a week with a single and a double hour combination of intensely practical lessons. After each lesson, a podcast was generated using a script of the salient pedagogical features that were implemented, discussed or alluded to in class. The script was enhanced with commentary based on the teacher's observations of

individual as well as group performance or critical incidents that occurred during play. Issues, anomalies and questions that arose in the post-lesson debrief were also included in the podcast summary to add a sense of humor, déjà-vu and relevance to the context, as well as a source of "deepening" (Lazzari, 2009, p. 29).

Delivery

Although the process of publication was somewhat time-consuming, this inconvenience was tempered by the knowledge that the podcasts would become more-or-less a permanent resource for faculty as well as students. The podcasts, ranging in time from three minutes, 45 seconds to seven minutes for every session, were available within a day of the practical and forwarded to the students' e-mail accounts. 'Audacity' was the software used to capture the commentary and this was converted into an audio-file by Posterous.com. This system was relatively smooth, was easy to use and was proven to deliver very good quality sound. To attract attention to each podcast a separate group *sms* (text) was simultaneously delivered to the students' cell phones.

Participants

The participants were first year PETE students in a Post-graduate diploma program. The student cohort was divided into two equal groups of 20: One group became the experimental group and the other the control group. Each group had a different teacher, but both teachers, who had taught this course together previously, used the same course outline and sequence, materials and resources. The role of the podcasts was initially explained to the experimental group simply as an enhancement, in addition to the normal course materials and tutorials that both groups would receive. The experimental group participants were requested to protect the podcast content as a private arrangement.

Survey and Focus-Group Interview

After the end of course test, the experimental group was subsequently invited to attend a briefing to further describe the intervention and complete a survey. The survey was administered by a neutral faculty member, not a part of the cohort instruction or program administration, nor directly known to the students. The students were briefed about the purpose of the survey and informed that it was voluntary (they could withdraw at any time without penalty) as well as confidential (no names were submitted). All of the students were able to provide consent (over the age of 21) and were capable of making this decision without any duress.

After the survey was completed, the same faculty member randomly selected a group of six (every third member on the class roster) for a focus group interview. This whole process of completing the survey and interview was managed in less than an hour. The survey included 17 questions, many using a five-point Likert scale, with several seeking clarification of the graded response.

Results and Discussion

Survey Findings

A significant majority of postgraduates (80%) were not receiving any ICT support in PE beyond this course. No other course was engaging the students in blogging or podcasting and only one respondent mentioned access to a website in another game-related module, reinforcing the paucity of ICT in PETE practical instruction. Everyone (100%) listened to the podcast alone, not with friends or in groups, and the majority (70%) listened to them at home. The other major engagement away from home was while driving or exercising (25%). When asked about the convenience aspect of listening to the podcast, there was almost an even distribution between tuning in 'the same week' (45%) and listening 'over the weekend' (55%).

The lowest response on quantity of podcast access was 'half' (5%), whereas just over a third (35%) said 'many', and the majority (60%) reported listening to 'every single one' of them. This question produced an M=4.6 on a five-point Likert scale and resonated with Lazzari's (2009, p. 33) study which referenced the commitment and 'high level of *engagement* within the podcasting project'.

The media delivery platform (Audacity) was rated M=4.5 on a 5-point Likert scale: good (10%), very good (30%) and excellent (60%). The audio quality was similarly rated as M=4.4 (good, 10%; very good, 40%; excellent, 50%).

From a social and emotional perspective, the postgraduates were asked to rate the podcasts from 'irritating' (1) to 'worth looking forward to' (5) and the results indicated that 10% were 'neutral' (3) about this question, 60% found them 'enjoyable' (4) and 30% reported that the podcasts were 'worth looking forward to' (5: M=4.2). On a similar scale ranging from 'awful' (1) to 'awesome' (5), a quarter of the postgraduates (25%) responded about the content as 'satisfactory' (3), half (50%) as 'really interesting' (4) and the remaining quarter as 'awesome' (5: M= 4.0).

When asked if the material was educationally helpful: 15% responded with 'OK' (3), 50% with 'very helpful' (4), and 40% as 'exceptionally helpful' (5: M= 4.5). The most popular response from the postgraduates revolved around the aspect of consolidation, reiteration, and reinforcement. The second most popular response suggested that the podcasts were important for reflection, as the lessons were very dynamic with an intense pace that presented insufficient time to spontaneously internalize everything that was happening or why! Thirdly, in agreement with Lazzari's (2009) finding, the podcasts are perennial and offer convenient access at anytime and as such were invaluable as resources before tests or exams. Some stated that the podcasts were beneficial for visualizing the content as well as for elaborating on the key teaching/pedagogical inputs: in Lazzari's words (2009, p. 31) they had a 'positive impact on their learning process and reduced their stress before the exam." Arising from this, other respondents felt that the podcasts would be of significant value during a teaching practicum (TP) as they could act as a constant reminder of what, how, where and when to enact the principles of game play.

To investigate the impact of podcasting on learning, an independent t-test was conducted on the grades from both the experimental as well as the control group. SPSS17 found no significant difference between the two groups in overall marks (t= -3.162, *df* 38, p =.650), or test scores (t= -.963, *df*38, p =.883), whereas there was a significant difference in the assignment marks (t= -5.839, *df* 38, p=.011). Although the final grade statistic would suggest agreement with Deal's (2007) finding of no measurable improvement, the assignment statistic, which supports Evans

(2007) finding of grade improvement, may have nothing to relate to podcasting, but leaves the door open for further investigation of this effect.

Intermittent anecdotes arising from questions and opinions expressed during lesson debriefing or from class performances and/or idiosyncracies observed during class made the podcasts more personal and alluring. All of the students (100%) reported that the podcasts accurately represented what they had experienced and were consequently authentic resources for them.

In relation to a question about learning, where the podcast contributed to an extension of 'game-sense' or 'increased understanding', 5% reported 'not much' (2), 10% were 'neutral' (3), 45% said 'a little' (4) and 40% reported 'a great deal' (5: M= 4.2). More than half (60%) reported that the material added a valuable element of pedagogical content knowledge (M= 4.5) and 65% suggested that the podcasts would be useful to them in the future as PE teachers (M= 4.6). Finally, as an overall rank of the podcasting experience on a 10 point scale, the postgraduates gave podcasting a resounding thumbs up (7=15%; 8=20%; 9=40%; 10=25%: M= 8.75).

As a summary, the postgraduates were asked how the podcasting procedure could be improved and there were some useful and interesting comments: 40% said the podcasts were 'fine as they were' and could not be improved, whereas 15% suggested that 'blogs' for class discussion could be promoted intermittently, but not regularly. As the podcast was challenging to digest in one sitting, it was suggested that making a hard copy of the podcast notes available would make this experience even more rewarding. One respondent further suggested that posting on *i-tunes* would be "Cooler", while another suggested that podcasting would be a tremendous aid for PE examinations in schools.

Focus Group Interview

The Focus Group Interview strongly reinforced the survey findings. While mindful of a 'Hawthorne' (Gillespie, 1991) or 'Rosenthal' effect (Rosenthal & Jacobsen, 1968), the group members were consistently unanimous throughout, except for one suggestion to 'cluster' several podcasts of a similar nature together. This opinion was *over ruled* by the others, who commented on the unique and diverse nature of each lesson, suggesting a danger that valuable commentary may be overlooked.

Podcasts were helpful for diverse learners as not everyone rationalized their learning and understanding from the same perspective, and they contributed significantly to everyone's memory bank regardless of disposition. Customization of the commentary to the class allowed different people to refocus their principles and values in light of the bigger picture of a games education, something not always achieved in a conventional pedagogy. Similarly, tailoring the content added extra meaning at an individual level as this provided an opportunity to present comments that were unique to the class being taught. As the content was not generalized for mass consumption, the podcast became more personal, was greatly appreciated and constituted part of the 'worth looking forward to' dimension.

In view of constraints such as time, the podcast was reportedly a convenient means of reflection that afforded the opportunity to reinforce learning through the concepts taught, as well as the opportunity to expand on them. This served an even more important function for students who were absent from class or who were engaged in external training (athletic) development programs. One group member even stated that s/he became too reliant on the podcasts to the detriment of the other course materials. The group was unanimous about the impact of podcasts for examination revision and how significant they were in this process. Access 'while driving' and 'when exercising' were also mentioned as positive features of the versatility and convenience of this technology-'anywhere, anytime' was the anthem reverberating around the forum.

The Focus Group interviewees were unanimously of the opinion that podcasting strengthened the teacher-student relationship and was therefore indispensible. The group believed podcasting was an excellent way to interact with students beyond the classroom and had potential for developing the PE curriculum in schools. As there was some concern communicated about the access and availability some pupils might experience, some reservations about disadvantage were expressed. There was also a question of managing such a resource when regular PE classes in Singapore have 40 or more pupils. As each teacher has multiple classes per day, podcasting will require logistical scrutiny and careful evaluation to achieve a satisfactory level of feasibility. There might also be a dissonance in many schools where pupils are not examined in PE, and the 'why do we have to think in PE' brigade would represent a challenge to be convinced of podcasting's purpose and value. Finally, one postgraduate suggested that a compilation of podcasts and other technological resources in the form of a cd/dvd would be a wonderful souvenir for a pupil at the end of an academic year or the end of a school program. This memento would act as a testament to the experiences acquired, as well as the knowledge and values espoused, during their PE life in school.

Conclusion and Recommendations

Podcasting was acknowledged by this postgraduate population, as a significant qualitative success in terms of social, emotional and pedagogical enhancement. As a technological tool podcasting provided individual convenience and promoted a strong bond with the teacher. However, more investigation is necessary to establish a stronger association to 'learning', as this would still appear to be unclear. Lazzari (2009) used podcasts as a student assessment tool and this represents a clear extension to the present pedagogy, taking the form of a regular discourse analysis. Although examining podcasting for grades is a possible consideration in the future, this could easily impact on the strong social and emotional dimensions of engagement that were an outcome of this intervention; and, at the time of the study direct assessment was not an intended purpose of its efficacy.

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